

## CLAIMS

1. Circuitry for generating a random key, comprising:  
a random number generator for generating a random number  
implemented in an integrated circuit;  
5 a memory internal to the integrated circuit for receiving and permanently  
storing the random number, said memory being accessible only internally to the  
integrated circuit.
2. The circuitry of claim 1 and further comprising circuitry for  
detecting undesirable random numbers.
- 10 3. The circuitry of claim 2 wherein said detecting circuitry comprises  
circuitry for detecting a ratio of "1"s and "0"s in said random number and  
comparing the ratio to a threshold.
4. The circuitry of claim 1 and further comprising comparison  
circuitry for comparing the value stored in said memory to the random number.
- 15 5. A mobile computing device comprising:  
processing circuitry implemented in an integrated circuit;  
a random key generator circuit implemented in said integrated circuit and  
coupled to said processing circuitry, comprising:  
a random number generator for generating a random number;  
20 a memory internal to the integrated circuit for receiving and  
permanently storing the random number, said memory being accessible only  
internally to the integrated circuit.
6. The mobile computing device of claim 5 wherein said random key  
generator further comprises circuitry for detecting undesirable random numbers.

7. The mobile computing device of claim 6 wherein said detecting circuitry comprises circuitry for detecting a ratio of "1"s and "0"s in said random number and comparing the ratio to a threshold.

8. The mobile computing device of claim 6 wherein said random key  
5 generator circuit further comprises comparison circuitry for comparing the value stored in said memory to the random number.

9. A method of generating a random key, comprising the steps of:  
generating a random number in an integrated circuit;  
permanently storing the random number in a memory on said integrated  
10 circuit, where said memory is accessible only internally to the integrated circuit.

10. The method of claim 9 and further comprising the steps of  
identifying undesirable random numbers and regenerating a new random  
number in response thereto.